July 22, 2005

Mr. Paul Dabbs
Department of Water Resources
P.O. Box 942836
Sacramento, CA 94236-0001

Re: Friends of the River's Comments – Draft Water Plan Update 2005

Dear Mr. Dabbs:

Friends of the River appreciates the opportunity to review and comment on the California Water Plan Update 2005.

Update 2005 is a vast improvement over previous updates. We congratulate the Department of Water Resources (DWR) for using a more open, transparent, and inclusive process to develop Update 2005.

The key message of Update 2005 is that California can fully meet its future water needs through 2030 by investing in water efficiency, recycling, groundwater management, and other water management improvements. DWR's own engineering data show that California can fully meet future demand by increasing the productivity of each unit of water, rather than investing in costly new storage. In fact, the three scenarios [page 4-5 of Highlights] show that if current trends continue, California will actually be using less water in the future.

Below are our specific comments.

Scenarios –

The Less Resource Intensive Scenario fails to make clear that implementation of environmentally preferred strategies at the regional level can result in a reduction in total water use by 2030. We understand that the Pacific Institute is modeling a Less Resource Intensive Scenario that assumes full implementation of regional strategies. This modified Scenario should be analyzed in the final Update 2005.

The Less Resource Intensive Scenario should also incorporate data from "Investment Strategy for California Water" by the Planning and Conservation League. This study shows that additional investments in groundwater treatment, water recycling, and urban and agricultural water use efficiency can increase available water supplies by nearly 4.7 million acre feet.

In the Less Resource Intensive Scenario, DWR refers to the study by Environmental Defense (ED) on environmental restoration. We believe that this study identifies the minimum amount of water needed for the environment. ED's study provided *baseline* numbers and should not be considered sufficient for full environmental recovery.

No scenario should assume increased Bay-Delta exports. DWR must first determine why the Delta fishery is collapsing before considering increased Delta pumping.

Surface Storage –

The implication in CALFED and Regional/Local Surface Storage chapters that more surface storage is needed is not supported by the facts. In addition to DWR's own finding that other management options provide more reliable water supplies, this Chapter ignores the fact that California has increased surface and groundwater storage by six million acre feet in the last 15 years.

DWR should not include highly speculative yield estimates for surface storage projects in the regional or statewide water budgets unless and until feasibility studies are completed that show that a surface storage project or dam raise is feasible. As DWR's own numbers show, water efficiency, recycling, and groundwater management are the most productive options.

It's worth repeating that DWR's own numbers show that CALFED and local surface storage projects, including the proposed Shasta Dam raise, Sites Reservoir, enlargement of Los Vaqueros Reservoir, and the proposed Temperance Flat Dam, will provide less reliable water supply than any other water management option, including cloud seeding (Highlights, page 15).

Update 2005 gives short shrift to environmental problems associated with increased storage and conveyance. The chapters addressing these issues have specific sections outlining potential benefits, but environmental, economic, and social impacts are lumped together simply as "Issues". In fact, many of these "issues" will prove to be insurmountable and directly contribute to the demise of most surface storage projects and conveyance schemes.

The final Update 2005 should provide a fair assessment of environmental, economic, and social problems associated with increased storage and conveyance. As an example, we have attached to these comments, FOR's fact sheet on the potential environmental impacts associated with CALFED's proposed raise of Shasta Dam.

The implication in Chapter 17, pg. 3, that traditional water resources cost/benefit analysis does not apply to new surface storage projects like Diamond Valley Dam and Los Vaqueros is troubling. Ultimately, the use of water from these projects is consumptive in nature, regardless of whether they were constructed to provide drought year supply or to improve water quality. Therefore, assessing the cost of water per unit still applies. Similarly, the claim that CALFED surface storage projects may provide "broad public benefits" is increasingly questionable.

We appreciate the fact that Update 2005 recognizes that most suitable water storage sites have been taken (Chapter 18, pg. 3). Unfortunately, this fact has yet to be recognized by agencies that continue to spend millions of dollars of public money to analyze sites that simply will produce little or no additional water (Temperance Flat Dam on the San Joaquin River for example).

Conveyance –

The assumptions that form the basis of Update 2005's section on Conveyance need to be reassessed. After three years of the highest export levels of fresh water ever, the Delta ecosystem is collapsing. Delta smelt are at the lowest levels ever and stripped bass are at the lowest level in 45 years. The food chain these species depend on is also collapsing. It is clear that California's current and future water needs can no longer depend on ongoing or increased transfers of fresh water through the Delta.

Update 2005 has taken a significant first step towards encouraging every region of California to move towards self- sufficiency by investing in water efficiency, reclamation, and improved management. More steps need to be taken to wean the state from a disastrous water export scheme that is destroying the largest fresh water estuary on the West Coast.

Hydrologic Regions –

Update 2005's summaries of each major hydrologic region in the state are quite useful. The maps that show the inflow and outflow of fresh water in each region are particularly informative.

The bar graphs showing applied water uses for each hydrologic region and the overall California Water Balance (Highlights pg. 2) are misleading. These graphs generally show significant amounts of water reserved for Wild & Scenic Rivers. Although state and federal law require flows to be maintained in designated river segments, the flow of most

designated rivers in California is captured downstream for consumptive use and other purposes.

Only in the North Coast region do designated Wild & Scenic Rivers flow to the sea. Even in that region, several designated rivers (notably the Klamath, Trinity, and Eel) are plagued by upstream water diversions that result in insufficient flows in the Wild & Scenic segments to meet the purposes of designation (protection and enhancement of anadromous fisheries). In all other regions, it appears that DWR is double counting water.

Federal agencies that manage Wild & Scenic Rivers have not applied for any specific water rights on designated rivers, nor has the California Water Board assigned or appropriated any specific water rights for such purposes. It appears that Update 2005's graphs simply account for water that has fallen from the sky and subsequently flows downstream in designated rivers, not water intensionally reserved for that use. FOR raised this issue in response to Update 1998 and it seems that this problem has not been rectified.

Ecosystem Restoration –

"California's ecosystems cannot be restored to their natural state, nor is that restoration desirable," (Chapter 9, pg. 1) lacks context and is much more of an opinion than a statement of fact. It should be stricken from the text or at least modified to say that "Some California ecosystems…nor is full restoration always possible or desirable."

Much of the costs of ecosystem restoration summarized on pg. 9-4 are actually mitigation costs for water resources development (fish screens for water diversions, the Environmental Water Account, purchase and replacement of habitat lost due to development, etc).

It should be noted that "success" stories such as the spring run salmon returning to Butte Creek (pg. 6-12) have not been replicated elsewhere. It should also be noted that at least half of the spring run salmon that have returned to Butte Creek have died before spawning due to high water temperatures and habitat limited by hydro dams.

The public cost of the Battle Creek Restoration Project (pg. 6-12) has nearly tripled. The current project does not fully restore flows or fish passage. Only a project that removes all eight hydro dams below the creek's natural fish barriers will fully restore the creek and meet the project objectives.

Global Climate Change –

The state should prepare for the impacts of global climate change on water supplies, water use, and land use by increasing the capacity of river floodways, setting back levees, improving the physical engineering and operations of existing dams, and discouraging development in dangerous floodplains.

According to the California Energy Commission, water storage, conveyance, and treatment use 10% of all electricity in the state. In fact, the State Water Project is the single largest user of electricity in California. Water efficiency is California's most energy efficient option. It not only reduces the amount of energy we need to store, treat, and deliver water to customers, it helps reduce the impacts of global warming.

Environmental Justice –

All Californians deserve clean and affordable water. Please strengthen the Update by including a policy that all Californians, including low income communities and communities of color, have access to clean, reliable and affordable water for drinking, recreation, and fish consumption.

Conclusion –

Update 2005 shows that we can more than meet California's future water needs with no new expensive dams. The document conclusively proves that we can use less water in 2030 than we do today be simply investing in water efficiency, reclamation, and improved management. We urge DWR to take all necessary steps to begin the implementation of the new water future outlined in Update 2005.

Sincerely,

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Shasta Dam Raise Threatens Environment, Produces Little Water

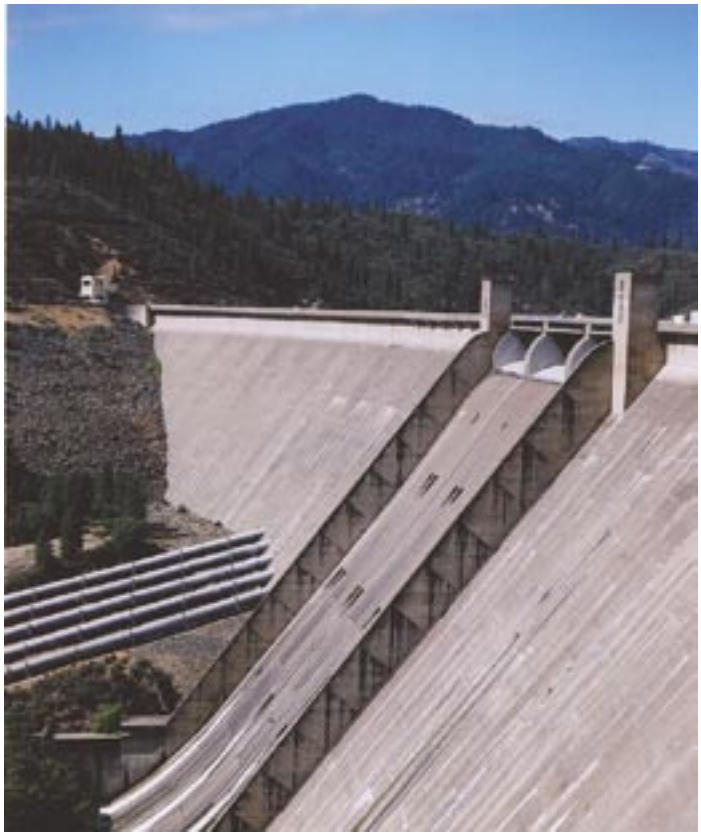
By Steve Evans

The U.S. Bureau of Reclamation is studying the feasibility of raising Shasta Dam and enlarging its reservoir. Although Reclamation claims that at least some of the water captured by a raised dam will be used to benefit endangered salmon downstream, it is likely that most of the water would be used to meet recently renewed federal water contracts that promise more water than is available from existing facilities.

Completed in 1945 on the Sacramento River, the dam is already the highest in California, and its 4.5 million acre-feet reservoir is the largest (by volume) in the state. Key issues concerning the dam raise include the drowning of Native American heritage lands, public recreation sites and other structures, as well as upstream river segments and habitat. In addition, the raise produces very little water at a very high cost.

Dam Raise/Reservoir Enlargement Options

Reclamation is focused on two dam raise and reservoir enlargement options. The first is a 6.5-feet raise that would enlarge the reservoir by 290,000 acre-feet, and the second is a 18.5-feet raise that would enlarge the reservoir by 636,000 acre-feet. Reclamation has tabled, but not completely eliminated consideration of, a 200-feet raise that would more than double the volume of the existing reservoir, with devastating environmental and economic impacts.



Steve Evans

Enlarging Shasta Dam ensures nothing but more destruction and enormous taxpayer cost.

How Much Water Will the Dam Raise Produce?

Because dams don't create water (they merely capture rain and snowmelt), the firm yield that can be produced reliably on an annual basis depends on annual rainfall. The hypothetical firm yield of water produced from the 6.5-feet raise ranges from 20,000 to 72,000 acre-feet. The hypothetical firm yield of the 18.5-feet raise is 71,000 to 146,000 acre-feet. In comparison, if farmers producing low-value alfalfa were to conserve a mere 5 percent of the water they consume, it would save nearly 1 million acre-feet of water.

How Much Will the Dam Raise and Water Cost?

Reclamation currently projects that construction costs for the 6.5-feet raise range from $282 to $356 million, with annual operation-and-maintenance costs of $19 to $20 million. Construction costs for the 18.5-feet raise range $408 to $483 million, with annual costs ranging from $28 to $34 million. (Consider, too, that initial dam construction cost estimates are notorious for failing to capture the final actual costs of projects.) Therefore, the cost of the water produced by these options ranges from $220 to $270 per acre-foot. This is not competitive with the $50 to $150 per acre-foot currently paid by farmers who consume most of the developed water in the Central Valley. Urban water users who have the potential to finance a dam project in California are simply not interested in financing a Shasta raise and are pursuing cheaper and more reliable water supply and quality options.

How Much Additional Electricity Would a Raised Dam Generate?

Raising Shasta Dam would increase the dam's total hydropower generation. However, it would require a significant amount of energy to pump the water captured by the dam to potential users in the San Joaquin Valley or Southern California—the main reason for the raise. An analysis by the Natural Resources Defense Council revealed that if the water generated by a dam raise were to be pumped to Southern California, it would require more energy than would be generated by the raise, thus making the project a net energy consumer.

Impacts on the Human and Natural Environment

Although the benefits of a raise are negligible, the potential damage is significant and far-ranging—from the reservoir all the way to the Delta.

Native American Tribal Lands/Cultural Values—The

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existing Shasta Reservoir drowned more than 90 percent of the Winnemem Wintu tribe's homeland. Even the smallest proposed raise will drown the tribe's remaining sacred cultural sites, some of which they still use today, and would violate state law protecting sacred sites.

Recreation Sites, Infrastructure, and Local Businesses—More than 600 structures—including marinas, campgrounds, buildings, roads, and bridges—will have to be relocated, modified, or protected from the raise.

Scenic Values—The dam raise would significantly increase the unsightly "bathtub ring" around Shasta Reservoir. The height of the reservoir depends on annual precipitation. Increasing the total volume of the reservoir simply means that the reservoir will fill less often. The existing reservoir has filled only 18 times during the last 50 years. The expanded reservoir would have filled only 3 of the previous 20 years.

McCloud River—The dam raise and reservoir expansion would violate state law by drowning nearly 2 miles of the McCloud River. State law prohibits any new dam or reservoir that adversely affect the river's free-flowing condition and wild trout fishery. The reservoir expansion would also drown portions of the upper Sacramento River, Pit River, and Squaw Creek.

Sacramento River—The dam raise would further modify flows downstream in the Sacramento River by capturing additional flood flows and spring runoff. These high flows are needed in the lower Sacramento River to drive the erosion-deposition processes (river "meander") that recreates vital riparian and fish spawning habitat.

Rare, Threatened, and Endangered Species—To increase water deliveries, Reclamation weakened two key salmon protection measures that constrained Shasta Dam operations. These changes will result in a more than 9 percent increase in mortality for the endangered winter-run chinook salmon and more than 3.5 percent increase in threatened spring-run salmon mortality in critically dry years. It is unclear whether these impacts can or will be fully mitigated by the dam raise. In any case, operating the dam to benefit salmon is largely up to Reclamation, and the agency has already demonstrated its disregard for protecting the river's dwindling fisheries.

Steve Evans

A raised Shasta Dam will drown this portion of the McCloud River.

Sources:
Shasta Lake Water Resources Investigation. Bureau of Reclamation, 2004.
Trinity River Restoration Project Revised EIS. Unpublished, 2004.

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